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The politics of scale and disaster risk governance: barriers to decentralisation in Portland, Jamaica

Abstract: Good governance has been clearly identified as a priority for deep disaster vulnerability reduction and resilience-building. In particular, decentralisation has been lauded as a mechanism to democratise risk management decision-making, by redistributing power across scales in favour of local actors. However, in practice, decentralised risk management frameworks have been critiqued for being incomplete and exclusionary. This paper argues that the politics of scale offers a neglected yet highly valuable framework to understand the construction of limits to decentred power and agency, which cause these apparent gaps between decentralisation as ideology, policy and practice. Scale theory offers this by providing an insight into the dynamics which define where power is located within risk governance regimes, and why. With reference to a case study of Jamaica's decentralised disaster management system, the paper illustrates the processes through which scaled risk governance systems can be used, distorted, and shaped by their constituent actors. The analysis identifies three processes of incomplete decentralisation, scale-jumping, and scalar disconnect, as being responsible for the reinforcement of a state-centric power asymmetry within the national disaster management system and the stripping of local agency. Hence, these processes are highlighted as fundamental barriers to the aspirations of a framework that claims decentralisation as a normative goal. The conclusions drawn in this paper are significant for critical geographers and policy-makers interested in the conditions for equitable and effective risk governance policy, and who view local leadership as being necessary for long-term vulnerability reduction.

Key words: Disaster risk governance, politics of scale, decentralisation, participatory development, social construction, Jamaica

1. INTRODUCTION

Vulnerability, exposure and losses from disaster events are known to be escalating worldwide, and in increasingly uncertain ways as a result of climate change (IPCC 2012). Many have identified good governance as being fundamental to meet these present and future challenges, in order to ensure the timeliness and effectiveness of disaster risk reduction (DRR), emergency preparedness, and climate change adaptation (Adger et al 2009). Ahrens and Rudolph (2006) identify institutional failure as *the* fundamental source of disaster vulnerability, because of its inseparability from geographies of underdevelopment. Wisner et al (2004) argue governance underlies the reversal of many ‘root causes’ of vulnerability, supported by others who agree that good governance practices set the pre-conditions for deeper vulnerability reduction (Tompkins et al 2008, Cannon 2008). Adger et al (2009) state that governance responses are made more urgent by climate change, and will have fundamental implications for its social, economic, and political outcomes in the long-term. These views reflect the wider ‘good governance’ discourse which emerged in mainstream development literature in the 1990s and has since infiltrated the disasters field (Batterbury and Fernando 2006, Wisner et al 2004). Particular emphasis has been placed on the importance of decentralisation as a strategic priority in disaster risk governance, on the basis that it democratises and increases the efficiency of disaster risk management (DRM)¹ (Ahrens and Rudolph 2006). In response to these arguments, decentralisation has become a popular policy tool within global development discourse (driven in no small way by the neoliberal agendas of many transnational aid institutions).

¹ DRM encompasses disaster risk reduction (DRR), preparedness, relief and rehabilitation. The use of this term is favoured here to capture all risk management activities and emphasise the responsibility of institutions for these.

However, questions remain about what ‘good governance’ means in practice. In particular, an ongoing debate surrounds which actors are best equipped to design and deliver the most effective and equitable DRM outcomes – in other words, to what degree of decentralisation (including delegation to *non*-state actors) should governments aspire. Without denying the many challenges of decentred and participatory development (see Cooke and Kothari 2001), few would deny the moral and practical advantages of incorporating the voices of actors operating at scales below the national in development and environmental decision-making. Indeed, disaster geographers have long argued that community-based DRR, enabled by a nurturing and responsive local government, is necessary for meaningful vulnerability reduction (Blaikie et al 1994, Allen 2006). Nevertheless, decentralised environmental management has often been criticised for being exclusionary and incomplete (Pacheco 2004). Whilst there have been successes, many community-led DRM programmes have been observed to fail due to inadequate infrastructural, financial, technical and enforcement support from national and local government (Blaikie 2006, Allen 2006, Wisner 2001).

These observations raise two important issues. Firstly, determining the ‘right’ balance between ‘bottom-up’ and ‘top-down’ governance evidently remains a priority for long-term and sustainable risk reduction. This challenge can, perhaps, only be solved through iterative policy development and academic analysis with the benefit of hindsight. Further work is warranted on this question directly. However, if we take as a starting point the assumption that – as a minimum – some level of meaningful sub-national scale agency is desirable in disaster risk management (for reasons outlined in section 2), then the second – and rather more pressing – question becomes: what are the barriers to cross-scale power-sharing, and what is causing the current gap between DRM decentralisation as an ideology, policy and practice? As stated above, previous research has highlighted some of the practical challenges of institutionalised local participation, yet the *political* processes preventing ‘real’ decentralisation of power to

sub-national levels in DRM remain poorly understood. It is these challenges which this paper seeks to explore.

Specifically, this paper explores the nature and construction of barriers to the fulfilment of claims to cross-scale and decentred governance, with reference to a case study of Jamaica's decentralised DRM platform in the north-eastern parish of Portland. The paper argues that the nature of actor interactions within the Jamaican DRM framework has produced and reproduced scalar disparity, which restrict the agency of local actors to participate in DRM either strategically or operationally. This inhibition of the local scale has resulted in a disconnection between the places where disaster decision-making takes place, and the goal and purpose of decentralisation. Lying behind this disconnect is a geography of entrenched – yet non-inherent – power relations.

This paper adopts the politics of scale as an analytical frame to unpack the ways in which this power gradient is constructed and legitimised, revealing the processes through which the state maintains its relative empowerment over local-level actors. The contribution of the politics of scale in understanding this geography of relative empowerment is its constructivist lens, wherein the agency of any one actor is viewed as dynamic and contingent on multiple and competing inter-actor relationships. Scalar hierarchies are understood to arise through processes of 'scale structuration', whereby actors vie with one another for their relative positioning (Brenner 1998), and can become entrenched over time since "power is reflected in, and reproduced by, the capacity to control and capture resources from different levels" (Lebel et al 2005, pp.2).

This paper observes three processes of scale structuration in Jamaican DRM governance: 1) incomplete democratic decentralisation of resources and enforcement capacity (drawing on Pacheco 2004); 2) scale-jumping between the national disaster agency (ODPEM) and

communities; and 3) the isolation of communities due to weak chains of accountability, representation, and communication. These three processes both legitimate, and are legitimated by, the perceived weakness of local government – a dynamic which reproduces scalar inequity between national and sub-national actors. These processes have resulted in the persistence of low capacity for DRR within local government, and community dependency on the national disaster agency (ODPEM) before, during, and after disaster events. These findings resonate with Grove's (2013) Foucauldian conclusion that community-based DRM in Jamaica has constituted a means for the state to perpetuate existing norms through 'biopower', whereby local agency is channelled by the national agenda in a way which stifles the emergence of radical alternatives from the bottom-up. Nevertheless, despite these critiques, the system has successfully reduced disaster fatalities over its lifetime and ODPEM maintains a positive reputation amongst communities - largely the product of linking social capital (Aldrich 2011).

The application of the politics of scale to disaster governance research in this way responds to repeated calls for empirical cross-scale disasters research (Adger et al 2005, Baker and Refsgaard 2007, Osbahr et al 2008, UNISDR 2012), as well as Grove's (2013) appeal for a re-politicised disasters research agenda which moves disaster studies beyond objective assessments of policy or project outcomes. Thus, in order to "reopen the question of politics and power in hazards and vulnerability studies" (Grove 2013, pp.571), this paper shifts the debate away from structural description of DRM policy, towards the coproduction of institutions and agency. The question therefore becomes not whether a particular policy succeeds or fails, nor whether 'top-down' or 'bottom-up' is better for vulnerability reduction *per se*; rather, it emphasises *how* scaled governance systems are used, distorted, and shaped by DRM actors. Improved understanding of these processes is intended to stimulate innovative pathways to improved risk management policies and practice.

This paper focuses on scalar limits as a product of interactions between levels of the formal state infrastructure. Analysis of additional limits imposed by non-state actors (particularly transnational donor organisations and non-governmental institutions) is not the focus here; however these represent important avenues for further research. The arguments in this paper are relevant to disaster geography as well as political ecology more widely, the latter of which shares this paper's interest in the mutual constitution of power, institutions and environmental outcomes, and has witnessed mounting interest in the politics of scale (e.g. Neumann 2009). The remainder of this paper is organised as follows. Section 2 provides a summary of the key principles of scale theory and its relevance to understanding DRM governance, followed by section 3 which outlines the geographical context and field methodology. Section 4 presents a scalar analysis of DRM governance in Jamaica, identifying three processes of scale structuration and their political significance. Section 5 draws conclusions about scale and DRM, and considers lessons learnt about the development of improved DRM governance regimes in light of these.

2. THE POLITICS OF SCALE IN DISASTER RISK GOVERNANCE

2.1. SCALAR LIMITS TO DRM

Governance is defined as far more than 'government'. Much more broadly, it is the entire framework of social control, stewardship, and regulation which exerts power over and within society (Batterbury and Fernando 2006). The character of a governance regime, and the distribution of power, dependence, and provision that results, is determined by the balance of powers, rights, and responsibilities between a plethora of stakeholders which may include public and private, formal and informal, collective and individual actors (Wisner et al 2004, Ahrens and Rudolph 2006).

Influenced by the participatory development paradigm that emerged in the 1990s (Chambers 1995), there has been a sustained push within DRR and CCA towards more ‘bottom-up’ approaches which seek to offer local people a leadership position in the issues which affect their communities (Wisner et al 2004, Cannon 2008). To meet these aims, decentralisation is often cited as a key element of good DRM governance (Tompkins et al 2008, Ahrens and Rudolph 2006). It has also been a cornerstone of neoliberal ideology in the past twenty years, and is a popular condition for development and DRR funding amongst donor institutions. Decentralised risk management ostensibly seeks to draw power and resources away from the centre and redistribute them at lower levels of governance, democratising DRM by allowing local actors greater autonomy and increasing subnational efficiency and creativity (Tompkins et al 2008, Herrald 2006, Ahrens and Rudolph 2006).

However, decentralised and normatively participatory regimes have also been widely critiqued, mainly for failing to capture local voices in a meaningful way, to relinquish sufficient control, and to create a sufficiently ‘enabling’ institutional environment for empowered community-based activity (Blaikie 2006, Cannon 2008, Batterbury and Fernando 2006). Grove (2013) has also specifically questioned the ability of community-based DRM to promote meaningful empowerment and participation in Jamaica. The cause of these failings—termed ‘incomplete democratic decentralisation’ by Pacheco (2004)—often appears to be a responsibility–power gap in which the burden of increased DRM responsibility is delegated to communities without the necessary resources or support to fulfil these new duties (after Pelling 2011a). Allen (2006) neatly illustrates this phenomenon through an analysis of community-based disaster preparedness and climate adaptation in the Philippines, arguing that ‘real’ power at the community scale is only enabled by well resourced networks of infrastructures and services.

These challenges indicate that, while community-based approaches are highly valuable, they cannot be viewed as a panacea for risk reduction and must be matched by political will and governmental support in order to be meaningful and sustainable (Allen 2006). From a conceptual standpoint, these observations also highlight the crucial role of governance as a key limiting factor in vulnerability reduction, and necessitate an escape from the ‘local trap’ - that is, the assumption that vulnerability reduction at the local scale is inherently more effective than interventions at other or multiple scales (Brown and Purcell 2005, Mohan and Stokke 2000). In order to understand the barriers – and opportunities – to cross-scale DRM governance, two research objectives are necessary: 1) empirical research that brings together both expert and local knowledge about the quality and political nature of cross-scale interactions; and 2) unpacking the *construction* of entrenched power disparities that fundamentally limit the agency of the local scale. The politics of scale framework adopted in this paper fulfils both of these objectives, as argued below.

2.2. CONTRIBUTIONS FROM SCALE THEORY

Originating in regional studies and spatial science, the concept of scale in geography is highly familiar (Marston 2000). Theorisation about scale within human geography began in the 1980s, growing initially from Marxist critiques of the observed reconfiguration of power relations associated with processes of globalisation and ‘glocalisation’ (Swyngedouw 2004). A resurgence of interest in scale occurred around 2000, since when the politics of scale has proliferated into a large, contentious, and highly nuanced literature (see, for example, commentaries and critiques by Marston et al 2005, McCarthy 2005, Swyngedouw 2004, Jonas 2006, and Neumann 2009). Scale theory is centrally concerned with multilayered and multidirectional interactions between networked actors, which cause redistributions of power and responsibility. It thus offers a framework for questioning the ‘taken-for-granted’ status of hierarchical systems (Smith 2004), such as (in this case) multi-level governance frameworks.

Within the wider literature, an important conceptual distinction lies between: 1) literature on scale in relation to capitalist processes of production, reproduction and consumption (most notably, the work of Neil Smith and Neil Brenner), and 2) a more post-structural concern with the social construction of scales and their limits, which views social systems as the produced expression of power relations and inequities within a specific time and space (Purcell 2003). This paper is situated within the latter grouping, resonating particularly with the early work of Sallie Marston on the production of social scale and its socio-cultural (as well as political economic) determinants (2000). This section offers a summary of the main arguments of constructivist scale theory, providing a theoretical framing to the subsequent analysis of DRM governance in Jamaica. Four ‘ways of seeing’ scale are identified; scale is socially constructed, relational, both fixed and fluid, and inherently political. These principles, taken together, highlight the influence of DRM actors operating at multiple scales to realities at a single scale, and emphasise the crucial significance of relationships *between* scaled actors (and the motivations driving them) in the shaping of relative empowerment and agency. It is argued that only by understanding the processes through which inequitable power landscapes are constructed, can more equitable solutions to disaster risk governance challenges be sought.

(1) Scale is socially constructed

Strongly influenced by Henri Lefebvre’s work on the social production of space, scale theory rejects scale as an ontologically ‘given’ category (Marston 2000, Smith 2004). Rather, scale is socially constructed, non-inherent, and determined through political, economic, and social processes characteristic of a particular social system (McMaster and Sheppard 2004, Brenner 1997, Brown and Purcell 2005). Early scale theorists focused on capital, the state, and territory as the key drivers of scale construction; however, the added importance of social and cultural processes in producing scalar

differentiation is increasingly being recognised (Smith 1992, Marston 2000, Marston 2004, MacKinnon 2011).

(2) Scale is relational

A ‘scaled’ system inherently implies the existence of hierarchically arranged sub-levels – such as nested organisational structures, spatial boundaries or regulatory jurisdictions – which have become delineated relative to one another as part of a wider order of significance (Brown and Purcell 2005, McCarthy 2005). The relative importance of these tiers becomes established through processes of ‘scale structuration’ (Brenner 1998), which determine hierarchical organisation (McCarthy 2005). The objective of scalar analysis is to identify the pathways through which scale structuration occurs (Marston 2000), in order to unpack the construction of inequitable landscapes over time (Swyngedouw and Heynen 2003). It should be noted that this paper does not engage with debates around the ontological existence of scales, as proposed by Marston et al (2005). This is not to deny the theoretical significance of such arguments, merely to highlight that the definition of scale in this paper assumes reference to some order of relative hierarchy, whilst rejecting assumptions about the direction and fixidity of power flows within that hierarchy (Jonas 2006) (see also section 2.3).

(3) Scale is both fixed and fluid

Newstead, Reid and Sparke (2003) define scale as “the temporary fixing of the territorial scope of particular modalities of power” (pp.486). In other words, although scalar configurations can attain long-term hegemony through dominant social discourse (Kelly 1999), scalar relationships are the product of particular social assumptions at a particular time (Marston 2004)—personified, for example, by the

British class system, or the unequal relationship between globalised capital and local labour (McMaster and Sheppard 2004). Scales are therefore contingent and subject to a constant process of contestation and reproduction (Brown and Purcell 2005). The direction of power flows within scaled systems cannot be assumed, and power can flow in multiple directions as part of scale structuration (Jonas 2006).

(4) Scale is political

The term ‘politics of scale’—first used by Smith (1992)—has come into wide usage to reflect the political nature of scale structuration, demanding attention to the motives and methods of scaled actors jostling for position (Delaney and Leitner 1997, Leitner 2004, Brown and Purcell 2005). In many cases, “scalar configurations are not an independent variable that can cause outcomes, rather they are a strategy used by political groups to pursue a particular agenda” (Brown and Purcell 2005, pp.614). Such ‘spatial tactics’ (Brenner 1997) could include the state producing spatial scale through regulation, perpetuating its superior position of spatially and materially manifested power relative to citizens. Another example is ‘scale-jumping’, frequently documented as a strategy of resistance in which grassroots organisations ‘jump’ scale by partnering with international organisations as a means to increase their bargaining power relative to the state (Smith 1992, McCarthy 2005). Thus, just as scalar relations are constructed through socio-economic and political processes, so scale itself can be the vehicle for social, economic, or political change (Delaney and Leitner 1997, Leitner 2004). Revealing this dynamic mutual constitution of scale and social relations is central to understanding how hegemonic scalar relationships become entrenched, and is at the core of politics of scale research (Brown and Purcell 2005, Swyngedouw 2004, Swyngedouw and Heynen 2003).

In sum, scale literature informs a view of scale within decentralised DRM governance as non-inherent, dynamic, socially constructed, and political. This paper is engaged particularly with constructivist principle four (scale is political), which emphasises the everyday behaviours and interactions that actively *produce* scale by causing differential empowerment – hence offering a lens to visualise the geography of material power within metaphorical space. The attractiveness of the politics of scale in analysing decentralised disaster governance thus lies in its focus being not simply *who* has *what* type of power, but also *how* and *why*.

This paper's exploration of the politics of scale around DRM governance in Portland shows how political culture can continue to produce scales of governance, which concentrate power at the national scale and constrain local agency, despite ostensive efforts to redistribute these scales through decentralisation policy. These findings are relevant both to politics of scale theorists, and critical development geographers concerned with the barriers to local-scale emancipation. If deep vulnerability reduction requires the active participation of local actors in DRM, then the particular processes which are undermining community empowerment relative to the state – incomplete decentralisation, scale-jumping, and the isolation of communities - are of critical concern. Objectivist, legal-institutional accounts of cross-scale governance practices are unable to reveal these politics, because failure to question institutional hierarchy would obscure the disparity between de facto and de jure distributions of powers. For illustrative purposes, Table 1 draws a dualistic divide between objectivist/legal-institutional and constructivist/politics of scale approaches to disaster governance research, to highlight some of the key epistemological advantages of the latter.

[TABLE 1 HERE]

2.3. SCALED LANGUAGE

Before introducing evidence from Jamaica, a note on language is necessary. Elsewhere, the terms ‘scale’ and ‘level’ are often used interchangeably, yet avoiding this is essential to prevent scale becoming too ‘slippery’ a concept for analytical precision (Marston et al 2005, Brenner 2001, Moore 2008). This paper therefore draws a clear distinction between scale and level: scale is a register of hierarchical (but non-directional), unfixed, and constructed levels within which power can be unevenly distributed and distorted, and levels are the individual ‘rungs’ on these scale ladders (Lebel et al 2005, Christian Kull [pers.comm. 2013]). The terms national (state level), intermediate (parish government level) and local (community level) therefore refer to actors’ level within the Jamaican decentralised risk governance framework.

It should also be noted that here the term ‘empowerment’ is used in the literal sense of ‘having power’, as used by Delaney and Leitner (1997). In contrast to its usage in mainstream development literature, empowerment here refers to the agency of an actor to influence DRM outcomes, comprising both perceived and material capacity to induce change. Actors’ relative empowerment (which determines scale structuration) is therefore defined not by their delegated position within the institutional hierarchy, but by the nature of their interactions at and between levels.

3. DATA COLLECTION

3.1. GEOGRAPHICAL CONTEXT

Jamaica is the largest English-speaking island in the Caribbean, with a population of 2.7 million in 2012 (Statistical Institute of Jamaica 2013). It was selected as case study on the basis of its well-established DRM system, disproportionately high hazard exposure, and

variety of socioeconomic vulnerability factors (Pelling and Uitto 2001, UNISDR 2009, Sahay et al 2006). Globally, the Greater Antilles (Haiti, Cuba, and Jamaica) is the island group most vulnerable to disaster, and the Caribbean more widely has experienced increased disaster incidence every decade since 1970 (Sahay et al 2006). Jamaica has a tropical and multi-hazard environment, exposed to hurricanes, storm surge, flooding, earthquakes, landslides, drought, and tsunami (Opadeyi et al 2003, Jackson 2005, Collymore 2005). The Jamaican press reported damages of between JM\$1 and 5 billion following Hurricane Sandy (JIS 2012, *The Jamaica Gleaner* 2012, Hines 2012) and a 4.5% contraction of the agriculture, forestry, and fishing sectors the following year (Richardson 2013). Unfortunately, such losses are anticipated to increase further with global environmental change (Crowards 2000, Osei 2005, Parry et al 2007).

Jamaica's DRM framework has a decentralised, three-tier structure, used as a model in a number of Caribbean countries. DRM activities nationwide are coordinated by the Office of Disaster Preparedness and Emergency Management (ODPEM) – an independent government-affiliated office (funded by the Jamaican Government and transnational project funds) established in 1980 following devastating floods in 1979. ODPEM's activity is legislated by the 1993 Disaster Preparedness and Emergency Management Act (a revised version of which has been in draft form for the past six years, but has yet to be finalised), which holds it ultimately accountable to the National Disaster Committee (chaired by the Prime Minister) (ODPEM 1997). Parish Disaster Committees (PDCs) sit within the Parish Council of each of the fourteen parishes, representing the intermediate tier of DRM governance². Parish Councils have allocated budgets from the national government, however

² Note, the term 'local government' is not to be confused with the *most* local tier of governance in this system, which is the Zonal Committees. Rather, 'local government' refers to the intermediate tier (i.e. the Parish Council and PDC).

presently there is no autonomous budget for PDCs. At district (sub-parish) level, community-based Zonal Committees (ZCs) consist of community volunteers and are chaired by a locally elected Chairperson. See Figure 1 for a summary of the membership, mandate, and leadership of these three tiers. Each Parish Council employs a Parish Disaster Coordinator, whose responsibilities include supporting ZCs, ensuring the meeting of the PDC, and guiding the DRM agenda of local government. In addition, ODPEM employs four Regional Coordinators (based at head office), who oversee three or four Parishes each and maintain the link between ODPEM and the Parish Disaster Coordinators.

ODPEM's ostensive commitment to decentralised and participatory DRM activity is expressed not only through the establishment of the PDC and ZC system, but in the current range of projects it is engaged in. These include the Building Disaster Resilient Communities (BDRC) project, funded by the Canadian International Development Agency. Launched initially as a 3-year project in 2008, this project aimed to strengthen inter-agency partnerships between levels of government and non-government agencies. The main outputs have been establishing at least one ZC in every parish in Portland, and delivering community training programmes (ODPEM 2011, BDRC Project Manager [pers.comm.]).

Due to the longevity and activity of the Jamaican DRM framework, it is an ideal location to study interactions between levels of DRM decision-making. It also provides a rich context in which to explore cross-scale governance, and the power relations therein, because of the historically complex and often antipathetic nature of state–society relations in the country—albeit despite a comparatively stable post-colonial history since Independence in 1962 (Figueroa and Sives 2002). Nonetheless, Jamaica's embedded political culture is not only highly polarised (Gayle 1986), but also long associated with government rent-seeking (Gray 2004, Wilson 2011, Robotham 2003). As a result its international reputation has been somewhat marred by the predominance of violent crime and corruption in its socio-political

landscape. Although the level of political violence has fallen over the past decade, Jamaica's idiosyncratic blend of clientelism and 'garrison' politics³ has resulted in strong, divisive political allegiances and left a strong legacy of mistrust between communities and politicians (Figueroa and Sives 2002, Gray 2004, Williams-Raynor 2011). It is perhaps due to this, that interpersonal relationships were observed to be very significant in building community support for, and trust in, state-led DRM activity. These personal networks (and the small size of the country) provided a useful gateway to observe cross-scale interactions, and thus Jamaica was also selected because of the accessibility of the system for observation.

[FIGURE 1 HERE]

3.2. METHODOLOGY

Fieldwork was undertaken over 6 weeks in May–June 2011 in Kingston and the parish of Portland, Jamaica. Portland was selected for the investigation of DRM at intermediate and local scales on the basis of its high hazard exposure and the active status of its PDC, Parish Disaster Coordinator, and ZCs⁴. This high level of activity was crucial to ensure meaningful observation of the decentralised system 'in motion', although it means data are not necessarily representative of all parishes. Portland is a rural and predominantly agricultural parish with high poverty levels (Ishemo et al 2006, Meikle 1998, Parish Disaster Coordinator

³ A garrison is defined by Figueroa and Sives (2002) as "a veritable fortress where the dominant party and/or its local agents/supporters are able to exercise control over all significant political, economic and community related social activities" (pp.83). Historically they have associated most strongly with inner city areas, forming where government rent-seeking and populist tactics have fuelled bitter inter-community rifts intertwined with gang activity and drug cartels.

⁴ At the time of fieldwork, Portland had 38 active Zonal Committees (ZCs) compared with fewer than six in all other parishes (most have one or two) (ODPEM [pers.comm.]).

[pers. comm.]) and a relatively small population of 82,000 compared with other parishes (Statistical Institute of Jamaica 2013). Located in the north-east of the island, Portland experiences high annual rainfall and is very susceptible to flooding, soil erosion, and landslides, as well as cyclones and infrequent seismic activity (Ishemo et al 2006, Laing 2004, Ahmad 1995, MacGillivray 2007).

Data collection was qualitative, incorporating 21 in-depth interviews (up to 2 hours each), and 2 group interviews (7 and 20 participants respectively). In addition, ongoing periods of observation—consisting of informal conversations with key informants⁵, attending PDC and ZC meetings, and observing working interactions between individuals at all levels of the system—sought to identify non-structural and behavioural elements of cross-scale interaction. Stories told during these periods—particularly during a week spent shadowing the Parish Disaster Coordinator in her daily activities—contributed to a rich and nuanced picture of scale construction processes, and offered an insight beyond the time constraints of the fieldwork (for example, subtle geographies of inclusion and exclusion).

Interviews were held at all three tiers of the decentralised framework. They sought to understand the quality of actor interactions and explore DRM practices, performance indicators, mainstreaming, perceived barriers to system effectiveness, and areas for improvement. At the national level, key informants were drawn from the senior staff of ODPEM - including regional managers and the Director General - and from other closely affiliated government departments based in Kingston. Intermediate level interviews were conducted with members of the Portland Parish Council and PDC, including the Mayor and Parish Disaster Coordinator. At the local level, interviews were conducted with ZC Chairpersons and members, in the districts of Windsor, Fellowship, Skibo, and Manchioneal.

⁵ Participants were aware at all times of the researcher's identity.

Selection of respondents at this level utilised a combination of purposive and convenience sampling, seeking to maximise the range of viewpoints within time and capacity restraints since many communities are remote. ZC member interviews explored individuals' perceptions of different DRM actors and their respective roles, personal experience of risk and DRM processes, and personal involvement with the ZC. Group interviews were held after ZC meetings in Skibo and Manchioneal, to increase the capture of voices from ZCs in these communities. These two districts were selected from the existing sample of four villages, on the basis of their contrasting characteristics: Manchioneal has a well established ZC with high attendance at monthly meetings, whilst the ZC in Skibo is relatively new, and, although attendance at kick-off meetings in Skibo was high, some members expressed scepticism about the outcomes of their participation which brings into question the sustainability of this mobilisation. Again, this selection sought to highlight the diversity of held perceptions about DRM activity, and reasons behind communities' motivation to participate.

4. PROCESSES OF SCALE STRUCTURATION

The Jamaican case study reveals a power asymmetry between the national level and the local. Amongst communities in Portland Parish, ODPEM (the national disaster agency) was found to be held in a position of trust and respect. The Parish Council, in contrast, was perceived as ineffective and partisan amongst both ZCs and ODPEM employees. Interviews suggested that inadequate resourcing and enforcement capacity have failed to build political will for DRM within Portland's local government, which self-reinforces the weak part played by the Parish Council in DRM compared to ODPEM. This top-down power asymmetry extends to the community scale, which is trapped in a position of dependency, and participates in DRM in a solely reactive capacity. The construction and perpetuation of this power gradient is

attributed to three processes of scale structuration: incomplete decentralisation, scale-jumping, and the isolation of communities. These processes – the influence of which on relative actor empowerment is summarised in Figure 2 – have produced a highly and inequitably scaled system of governance, in which the state is reified and present at all levels whilst ZCs are trapped at a level of engagement limited solely to the community. The outcome is that policies and organisational forms designed to express decentralisation—understood as offering local partners enhanced policy voice, responsibility, and the opportunity and means to participate in DRM activities—have been distorted by the state infrastructure. This paper argues that these processes - detailed below—constitute spatial tactics through which national scale actors maintain asymmetrical power relations in their favour.

[FIGURE 2 HERE]

4.1. INCOMPLETE DECENTRALISATION

The first process of scale structuration, is incomplete decentralisation of the capacity for proactive DRM activity from ODPEM to the Parish Council and ZCs. Although the organisational structure is in place to facilitate the mainstreaming of disaster risk concerns within local government (the PDC has multisector membership, as outlined below) as well as linkage with communities via ZCs, these provisions are not matched by the allocation of resources and enforcement capacity. This issue is accompanied by (and probably exacerbates) low political will for DRM amongst Parish Councillors, which strengthens popular perception of DRM as ‘ODPEM’s business’ and thus legitimates the retention of DRM leadership at the centre. Currently, any proactive risk reduction or disaster relief activity tends to be popularly

attributed to ODPEM, indicating the strength of their identity as ‘DRM-giver’ relative to other scales.

Interviews with ZC members indicated that ODPEM is generally well respected, contrasting starkly with perceptions of local government as ineffective and partisan. Interviews indicated a high level of public trust in ODPEM, and ZC members spoke highly of its integrity, reliability, and responsiveness:

“They [ODPEM] are committed people, and they show it to the public. When ODPEM speaks, the nation listens” (R15⁶)

“I think that ODPEM has done exceptionally well, and it has kept its credibility in focusing on the people that are in need” (R8)

When criticisms of ODPEM did arise, they tended to focus on the speed of disaster response and relief, branching tangentially into critiques of utilities companies (water, electricity, etc.) with whom ODPEM communicates but has no direct control (R11). ODPEM’s trusted identity seems to be aided by its status as an independent, non-elected agency (although ODPEM’s board of management is appointed by the Office of the Prime Minister, it is operationally independent and largely avoids being drawn into populist political tactics because of its non-elected status), and through close association with other independent agencies such as the Social Development Commission. This independence offers ODPEM political neutrality and credibility in the eyes of ZCs by maintaining a distance from the political arena, which is still widely perceived as partisan by the Jamaican public (Gray 2004).

⁶ The notation R- represents a reference to interview transcripts. These are coded to preserve the anonymity of participants.

In contrast, the dominant perception of local government amongst community members and ODPEM staff was of relative ineffectiveness and non-expertise. Structurally, the PDC offers much potential for facilitating cross-sector collaboration in DRM, since its membership includes representatives from across the emergency services, utilities, and humanitarian organisations, as well as local Councillors. However, although the PDC was praised for meeting regularly, with enthusiastic leadership from the Mayor and the Parish Disaster Coordinator, many other aspects of Parish Council DRM activity were observed to function poorly: low Councillor attendance at PDC meetings, inadequate communication between relevant actors outside of meetings to ensure complementary responses, predominance of reactive rather than proactive risk management, and failure to mainstream DRM into everyday decision-making. These factors reportedly reflect low political will amongst Councillors to engage in DRM generally (R10, R16).

At community level, ZCs were viewed as a valuable forum for discussing risk issues within communities, and training for community members in first aid and emergency response has been fairly extensive (R11). ZCs were found to be engaged in DRM principles, motivated by notions of ‘giving back’ to their communities, and empowered by the possibility of taking individual and collective action to reduce community vulnerability. However, ZC meetings tend to be irregular and highly dependent on ongoing, direct support from the Parish Disaster Coordinator. ZCs currently receive no budget for DRR activities, and are prevented from fully utilising their training by deficiencies in emergency relief equipment such as first-aid kits, paper and record keeping materials, and blankets, as outlined below:

“The poor people want clothes, sheets and towels, food, blankets. We cannot get these things, even in the hurricane” (Group interview, Skibo)

“I don’t think that we are all that prepared for a major disaster. There are many things that we would like to have that we don’t have in our lower zones; we would like to have good first aid kits and things like those... if we needed anything we would have to ask ODPEM” (R11)

Thus, a power gradient is observed between ODPEM on the one hand, and the Parish Council and ZCs on the other. This retention of power at the centre may indicate a gap between the stated goals and the implementation of decentred DRM in Portland, and is worrying given the benefits of participatory DRM decision-making as outlined in section 2.1. This section focuses on the disempowerment of the Portland Parish Council relative to ODPEM, and section 4.3 addresses the isolation and disempowerment of ZCs. The reasons for this discourse of ineffectual local government DRM activity are twofold, categorised here as *imagined* (non-structural, behavioural) and *material* (structural) factors restricting Parish Council capacities. These pathways of disempowerment are mutually constitutive, as outlined below.

i) **Imagined disempowerment**

Although recent improvements in political will for DRM were noted, many respondents documented a failure within the Parish Council to fully acknowledge its responsibilities for DRM, and attributed this failure to low individual ownership of DRM principles by Councillors and Parish Council staff. One ODPEM representative stated:

“While we have this decentralised system it doesn’t work because the local authorities have never truly owned their responsibility for DRM” (R3)

‘Politics’ was often cited as a key weakness of local government, seemingly a product of the long tradition of partisan politics that cuts across Jamaican public sector institutions. ZC members repeatedly accused local Councillors of engaging in DRM “only when the goodies are around” (R8)—that is, close to election periods, when tangible project outputs

are proximate, or when funding is available post-disaster. Respondents often linked low political ownership to the lack of binding legislation for disaster risk reduction and preparedness activities, and to the lack of power held by the PDC to enforce the fulfilment of the Parish Council's DRM responsibilities. This lack of enforcement power fails to incentivise DRM as a priority within local government; as Ahrens and Rudolph observe, "only if policymakers and bureaucrats can be held accountable for their actions will they be responsive to their stakeholders" (2006, pp.214). Several respondents expressed hope that the revised Disasters Act will incorporate binding DRM legislation to strengthen the accountability chain (R13, R16, R21); however, so far such legislation is not included in the draft Bill.

These issues have, to date, perpetuated a culture of deference to ODPEM for DRM matters, reinforced by low awareness of the Parish Council's DRM responsibilities within the Council itself. In interviews, the Parish Disaster Coordinator – an employee of the Parish Council – was frequently referred to incorrectly as 'ODPEM' by ZCs, PDC members, and even the Mayor himself. This firm perception of DRM as 'ODPEM's business' is indicative of the construction of ODPEM's identity as 'DRM expert', while the association between local government and DRM remains weak. The perceived inadequacies of local government, in addition to the absence of a strong culture of DRR within the Parish Council, legitimises deference of responsibility to ODPEM and the Parish Disaster Coordinator – the latter of whom shoulders disproportionate responsibility for DRM at the intermediate scale and whose work is isolated from other council activities (Osei 2005). Greater formal mainstreaming of DRM into other sectors would probably raise the visibility of DRM within the Parish Council and promote political ownership of DRM responsibilities.

ii) **Material disempowerment**

A challenge cited repeatedly at all scales of the DRM framework—and also attributing to low incentive for proactive DRM— was insufficient funding. This echoes the HFA Interim Progress Report for Jamaica (ODPEM 2008) and was cited as a key barrier to the PDC delivering on its legislated DRM objectives. PDC members expressed frustration at having insufficient funds to be proactive in DRM, such as not being able to commence drain cleaning in advance of hurricane season (R15). Furthermore some PDC members admitted that “funding is found to do other things” (R10), supporting claims that DRM has low priority amongst local government decision-makers as suggested below:

“Maybe disaster preparedness is not seen as important; the powers that be have other concerns” (R10)

Some PDC members argued in favour of establishing an independent budget for the PDC because they currently have no financial control over their activities. They highlighted the existing autonomy that Parish Councils have to allocate committee budgets, which the Council could (but currently does not) use to establish a separate DRM budget.

As a result of this resource inadequacy, PDCs are caught in a space of dependence (Cox 1998) in which they are hindered from fully supporting communities and from acting proactively. As a result, individuals (namely, the Parish Disaster Coordinator and the Mayor) seeking to drive the risk reduction agenda forward within local government have been accused of “too much talk but little action” (R10), which risks degrading public faith in the DRM framework in the long-term. This observed contradiction between the establishment of the decentralised framework and the absence of adequate resourcing to support this—a clash between rhetorical and real devolution of power—constitutes what Pacheco has termed ‘incomplete democratic decentralisation’ (2004). Some respondents observed recent improvements in accepted responsibilities within Parish Councils, and

attributed these to ODPEM-led projects focused on reinforcing partnerships across sectors (see section 3.1). However, the Mayor of Portland confirmed these projects have not been accompanied by greater devolution of funds [pers.comm.].

These pathways of local government disempowerment demonstrate a clear power gradient between ODPEM and the Parish Council. They are also mutually constitutive, causing asymmetry to persist over time. Dichotomous narratives of ODPEM as strong, trusted, and expert, and Portland Parish Council as weak, partisan, and non-expert, translate into material terms because they legitimate the continuation of state-led DRM and the retention of resources at the centre. This dichotomy is perpetuated by limited mainstreaming of DRM into the everyday activities of other departments and partner organisations, and lack of enforcement of DRM activities at Parish Council level, which fails to build political will and institutional momentum. Thus, the failure to decentralise the identity of DRM-giver away from ODPEM creates a cycle of positive reinforcement between discourse and human practice (McMaster and Sheppard 2004, Kelly 1999), entrenching an inequitable scalar relationship in which knowledge and power gradients between the centre and local government are maintained in favour of the centre.

4.2. SCALE-JUMPING

The second process of scale structuration, is scale-jumping from the national scale to communities in DRR project design and implementation. The scale-jump was observed to be a product of perceived institutional weakness at local government level (as recounted above), combined with the relative strength of relationship between ODPEM and ZCs:

“I feel that ODPEM has a very strong connection with the community. The community people, they know us; we call them and they call us” (R8)

The scale-jump was recounted in stories told by ODPEM employees about their interaction with communities in numerous interviews. It was also observed directly during an EU-funded project kick-off meeting in Skibo (June 2011), where ODPEM had identified beneficiary communities using its own vulnerability index and was working directly with ZCs for project initiation. Such behaviour contributes to power asymmetry by failing to facilitate the acknowledgement, enforcement, and enablement of DRM activity at Parish Council level. Respondents identified this asymmetry as a frequent pattern for ODPEM's DRR projects, stating:

“The level of initiative [in the Parish Council] is not happening yet so most of the projects which can be initiated at the parish level are not being done; they're being initiated at ODPEM who partner direct with the community” (R8)

ODPEM employees attributed the scale-jump to Parish Council failure to acknowledge their responsibilities, arguing it is necessary for ODPEM to provide strong leadership and project oversight. It is of concern since weak local government support of community-level activities is known to lower project sustainability and reduce potential for vulnerability reduction in the long term (Jones et al 2013, Allen 2006, Larson 2002). Furthermore, whilst providing legitimacy to national and international actors, jumping to the community level misses the opportunity to strengthen local government capacity to support DRM by devolving funds and accountability for project implementation, thus embedding the misconception that responsibility for DRM lies purely at the national scale. Therefore, the scale-jump is both a product *and* driver of Parish Council weakness and is strongly implicated in scale structuration by reinforcing power asymmetry.

Scale-jumping has been identified elsewhere as a mechanism of political strategy (Brown and Purcell 2005), although to date has tended to focus on it as a mode of bottom-up resistance

(e.g. McCarthy 2005). Interpreted thus, the ‘jump’ from the national to the local level in DRM project implementation could be interpreted as a deliberate move to retain centralised control over project direction. The data support this argument:

“Members of parliament don’t want powerful local councillors, because they feel like they are diluting their authority. So there is no interest in strengthening local government; they see them as competing political factions” (R3)

Scale-jumping in DRM might therefore reflect a more deep-rooted ideology of centrism within the Jamaican national government (observed elsewhere by national-level observers including Gray (2004)). Reform within the DRM framework, necessary for a fuller form of decentralisation, will be subject to resistance by these deep-rooted value systems, which could require more substantial and transformative forms of change to improve equity across scales. This issue is explored further in section 5.

4.3. ISOLATION OF COMMUNITIES

The third mechanism of scale structuration is the disconnection of ZCs from DRM decision-making, most significantly through the partiality of their participation and representation in the design of risk reduction activities. This sensation of disconnect is captured thus:

“It’s like you have the head up here at the top but it’s chopped off. Down here we try our best, but we’re running around without the head. So there’s this disconnect, because there’s no form of responsibility” (R16)

Interviews revealed that communities have poor knowledge of their rights and responsibilities in DRM, including the existing mechanisms through which their voices are entitled to be heard. This unawareness reduces ZCs’ capacity for making bottom-up claims for entitlements or system reform, and is exacerbated by the selectivity of communities benefitting from ODPEM-led DRR projects. Public consultation in ODPEM-led DRM projects was found to

be a highly exclusive process in Portland, evading a key goal of grassroots participation: confirming the type of project the community actually requires (Ahrens and Rudolph 2006). ZCs were observed to participate in DRM only on ODPEM's terms, constituting a key limiting factor to their agency within the framework and indicating a significant gap between decentralisation de facto and de jure. Three factors were found to contribute to the disconnection of ZC participation from DRM decision-making.

Firstly, although public participation has been built into risk reduction project implementation (R8), there is no formal mechanism for community input into policy design and development. For example, the new hazard mitigation project launched in Skibo began with a consultation meeting, transect walk, and hazard-mapping exercise led by ODPEM, which ODPEM representatives stated was standard practice for all new projects. However, the incorporation of ZC suggestions made during these activities was subject to criteria set by international donors and ODPEM themselves, which are not open to community consultation. Because community consultations are not done in advance of project design, a frequent outcome is "scrambling around at the end of the day trying to find out how to bring certain issues into the project" (R8). One senior ODPEM employee acknowledged that community input into DRM planning at a strategic level would help to avoid this issue, by improving community buy-in and ensuring project suitability.

Secondly, community participation in ODPEM-led projects, such as the Skibo project, is limited to those villages which were pre-selected for project implementation. This selection is, again, made according to externally defined criteria. One criterion was that villages must demonstrate an existing level of community mobilisation, which in practice has resulted in 'well-organised' communities receiving repeated training sessions and funding for risk reduction and preparedness, while communities with lower levels of social cohesion are repeatedly excluded (ODPEM 2008).

Finally, although ZC chairpersons are technically entitled to attend PDC meetings to raise community concerns, in practice they do not attend because their numbers were found to disrupt and prolong the order of meetings, and the cost to reimburse their travel is high. As a result, Councillors are relied upon to represent their electorate to the PDC; however, as stated, Councillor attendance at PDC meetings tends to be low. Furthermore, ZCs indicated a low level of contact with their Councillors and openly doubted their commitment to representing community views. This failure of communication and representation is symptomatic of a wider challenge of weak chains of both upward and downward accountability within the DRM framework. The Jamaican Disasters Act of 1993 dictates that upward accountability for DRM is ensured through a chain of reporting from ZCs, to the PDC, to the National Disaster Committee. However, respondents felt strongly that upward reporting is inadequate and irregular. This issue is significant because lack of communication between actors contributes to inefficiencies and reduces opportunities for institutional learning (Tompkins et al 2008).

Thus, ZCs are exposed to a predominantly top-down delivery of information, and are restricted from meaningfully participating in DRM on their own terms. This partial form of participation is highly exclusive, maintaining an asymmetry of power and knowledge in favour of the centre that constitutes a core limiting factor to community-level empowerment and agency. The exclusion of ZC voices reinforces their position as reactive, rather than proactive, agents in DRM. Furthermore, the exclusion of ZCs from DRM decision-making renders outcomes vulnerable to distortion by national level interests. As Pelling (2003b) states, “power lies in relationships, and when partnerships are built on unequal relations of power, development outcomes are open to bias” (p.90).

4.4. DISCUSSION: SCALAR POLITICS OR SPATIAL TACTICS?

This section has outlined three processes of scale structuration in Jamaica's decentralised DRM framework, whereby an entrenched power asymmetry is constructed and maintained in favour of the national scale. The danger of these is the failure of mechanisms that enable the voices of ZCs to be heard in DRM decision-making, and, further, in voicing bottom-up claims to entitlements and system reform.

In the context of Gray's (2004) characterisation of the Jamaica state as 'parasitic' and primarily concerned with extending both the depth and spatial extent of its power, these processes could be interpreted as deliberate 'spatial tactics' (Brenner 1997) designed to legitimise the retention of power at the centre. On the basis of extensive fieldwork in Guyana, Pelling (2003a) similarly suggested that in countries like Jamaica, with a historically persistent rent-seeking culture, devolution of decision-making powers to community-level actors is likely to be resisted by local authorities "whose domination... is facilitated through the maintenance of relationships of dependency and patronage" (pp.85). The maintenance of gaps between ZCs and other scales of DRM governance in Jamaica could thus represent a spatial tactic that maintains the power balance against the community level—an important driver undermining the aspirations of decentralised DRM. A clear challenge is that any change to unequal power relations requires unravelling lines of party patronage, which themselves rely on failures of local governance on which they can be imposed, and, at the same time, a strengthening of local competence so that communities do not have to rely on party patronage to access resource and influence. Which comes first or is more important is difficult to answer, but both are deeply embedded in everyday public life and will be slow to change. This is a key challenge for many Caribbean countries, and, more widely, for other polities where a tradition of paternal or partisan politics often overpowers the local.

Despite these challenges, in many respects the system works. Portland maintains a very high number of active ZCs, which appears to reflect a high level of public engagement in risk reduction issues, and Portland is often held up by ODPEM as a national success story for DRM. This success can be attributed to strong informal relationships based on trust, facilitated greatly by the Portland Parish Disaster Coordinator, who was observed to act as a nexus of social capital within the system and offers considerable ‘bridging value’ between tiers of DRM governance. The Parish Disaster Coordinator was praised widely for her charm and professional dedication, and her personal relationships with ZC members and ODPEM employees alike was evidently important for overcoming the non-enforcement of upward and downward accountability chains (Pelling et al 2008). However, although currently effective, the dependence of ZCs on an individual, as opposed to their true integration into the system, seems an unsustainable ‘band-aid’ solution to the problems aforementioned (as also highlighted by the HFA report (ODPEM 2008)). Despite the efforts of the Parish Disaster Coordinator, poor accountability and unenforced standards allow DRM to remain highly state-centric—an issue that needs to be tackled at the root. Further research is needed to better understand the motives behind ODPEM’s predominantly top-down behaviour, and the relationship of this to state-centrism within Jamaican governance more widely.

5. CONCLUSIONS

This paper has applied the politics of scale as a constructivist theoretical framework to analyse the power relations that dictate and limit disaster risk governance outcomes in Jamaica. It has argued this re-scaling of disaster governance is a crucial step to understand the renegotiation of power across scales that decentralised DRM demands, and the barriers to it. In attempting this re-scaling, the paper has sought to contribute more widely to knowledge about the challenges in equitably and effectively meeting the dual demands of community-

level and state-level leadership in DRM. Although the value of a cross-scale approach has been acknowledged before, this application of scale theory to disaster risk governance represents a new and exciting avenue for research.

Section 2 revealed four key principles of constructivist scale theory, used to identify processes of scale structuration in the case study: scale is socially constructed, relational, both fixed and fluid, and political. As called for by Swyngedouw (2004), the analytical priority has been to reveal the processes through which relationships of relative empowerment are produced, reinforced and contested, in order to question entrenched power disparities. This framework revealed three processes of scale structuration in Portland: incomplete decentralisation, scale-jumping, and the isolation of communities. These processes have resulted in the structuration of a power gradient between ODPEM, the Parish Council and ZCs, in favour of the centre. This asymmetry is expressed through resource distribution and imagined geographies of ownership and responsibility for DRM, and is legitimised and reinforced by a discourse of DRM knowledge, expertise, and trust being retained at the centre. This power gradient constructs and exaggerates scalar disparity, undermining the legitimacy of the decentralised system as a whole by denying Parish and community level agency in DRM activities.

However, given the effectiveness of the regime in absolute terms (fatalities from natural disasters since 1980 have not increased, despite increased frequency of disaster events (EM-DAT 2013)), these findings raise interesting questions vis-a-vis the debate identified in the Introduction around the degree of decentralisation to which governments should aspire. If this regime can succeed in reducing risk *without* meaningful local participation, then how necessary are further measures to promote decentred leadership? This paper adopts the view that there is inherent ‘good’ in local participation, and clear benefits beyond utilitarian outcomes – most importantly, human dignity and the possibility of innovative and

emancipatory outcomes. Furthermore, the case study showed that in Jamaica the capacity of the DRM framework to reduce risk was directly undermined by its state-centrism, because of the low capacity for first-response in isolated areas due to inadequate provision of basic emergency equipment amongst ZCs. In addition, the ability of ODPEM-led interventions to reduce vulnerability in the long-term is uncertain, because they are not designed according to the expressed needs of ZCs and the communities they represent. Ultimately, the restriction of local agency within ostensibly decentred DRM governance regimes has direct implications for the ability of the system to capture and mobilise creative (and potentially more equitable) solutions to local risk management problems. Indeed, as stated by Grove (2013): “the challenge for radical disaster research is to unearth and mobilize subjugated knowledges of catastrophe and adaptation silenced by unreflexive participatory initiatives that sustain rather than change unjust socioecological systems” (pp.585).

Several lessons can be drawn from these findings, of significance both in theory and practice. From a theoretical standpoint, this study provides empirical grounding for scale theory which, although sophisticated and well developed, perhaps has suffered from an intensity of internal debate which tends to distract from its utility as a practical framework for geographical enquiry (Moore 2008, MacKinnon 2011). Thus, whilst confirming Brown and Purcell’s hypothesis that scale theory offers political ecology a “theoretical route out of the local trap” (2005, pp.607), this paper perhaps also offers scale an empirical route out of the theoretical trap. The results also confirm findings by Allen (2003, 2006), Mohan and Stokke (2000), Blaikie (2006), and Grove (2013), that in DRM, local actions are constrained by those of government – reaffirming the need for scale-focused disaster research. The primary benefit of a scalar approach was found to be its demand for attention to dynamics at and between all levels, adopting a whole-system view to help identify areas of relative strength and weakness. The weakness of the theoretical approach lies, perhaps, in the lack of analytical depth of each

individual scale which may be achieved, however this could be attained through further research.

From a policy perspective, better understanding scalar limits to governance systems has the potential to benefit policy-makers concerned with how cross-scale risk governance might be facilitated in practice. Specifically, these results illustrate the importance of: decentralisation of both power *and* resources for local empowerment (Pacheco 2004); the critical value of strong local (i.e. intermediate level) government in supporting local agency; the important role of communication and participation across sectors and levels, to ensure accountability and trust; and the importance of political neutrality in risk management.

Additional research is recommended into the micro-politics of DRM governance that lead to scale structuration. In particular, further work is warranted on the nature of centrism as an ideology and practice, the question being why it exists and persists despite aspirations of decentralisation being expressed via DRM policy design. Is this a natural process of filling a policy vacuum (as suggested by ODPEM's paternalistic response to perceived local failures), or simply a product of norms within state architecture (as implicated by local views of the Jamaican national government as self-serving)? How is centrism expressed in the everyday, and how is this justified? Linked to this, the process of scale-jumping from the national level as a mechanism of state control (and hence scale structuration) demands further investigation. Finally, on the question of what degree of decentralisation offers the most equitable and effective risk reduction, it is important to consider the potential dangers of complete decentralization to the community level in societies marked by clientelistic political cultures. What are the pathways to more transparent and accountable decentred DRM governance in such contexts, and what is the role of the state in this? Such questions have important moral as well as practical implications.

However, in the context of global environmental change, which is testing current assumptions about geographies of responsibility and entitlement (O'Brien et al 2009), the most pertinent question is about the stability of relationships within the DRM governance system. Some have begun to frame this issue in terms of challenges to the existing social contract between citizens and the state, as well as other actors including private and non-profit organisations (Pelling and Dill 2010, O'Brien et al 2009, Adger et al 2012). How might assumed roles dissolve and reform in response to such pressures, with what impact, and who may the parties be in an era when not only the state has responsibility for risk management? A scalar perspective, focused on the processes through which power asymmetries arise, are tested and maintained, offers much to such questions. This argument is highly relevant to the 'transformation' debate (Pelling 2011b), which is concerned with the ways socio-political values and behaviour are required to evolve for deep, more equitable, and ultimately sustainable forms of vulnerability reduction and adaptation. This research opens the door for more creative treatment of disaster risk governance, stimulating enquiry into these questions across societies, space and especially scale.

Figure captions

Figure 1: The Jamaican decentralised DRM system. Description of the mandated responsibilities, membership and leadership of the three levels of the decentralised DRM framework in Jamaica: ODPEM, the Parish Disaster Committee (PDC), and Zonal Committees (ZCs) (ODPEM 1997, www.odpem.org.jm, Portland Parish Disaster Coordinator [pers.comm.])

Figure 2: Relative actor empowerment and interactions. Diagram showing the relative strength of inter-actor relationships (relative relationship strength indicated by line thickness; dotted lines indicate dysfunctional relationship), relative empowerment of actors (indicated by the boldness of the font), and cross-scale processes of scale structuration (arrow direction indicates those affected). It illustrates: i) the disproportionate retention of power by ODPEM; ii) the ‘band aid’ role played by the Parish Disaster Coordinator in overcoming dysfunctional relationships between ODPEM-local government (due to scale-jumping) and local government-Zonal Committees (due to weak representation and low public trust in Councillors); and iii) the power held by the Parish Council to allocate additional funding for DRM and so strengthen its role, which is not realised.

Table 1: The contribution of constructivist scalar analysis to disaster risk governance research

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